

## PATENT ABSTRACTS OF JAPAN

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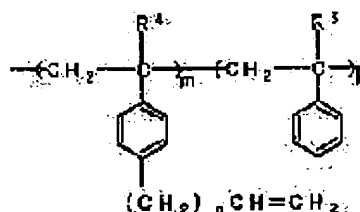
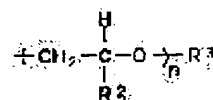
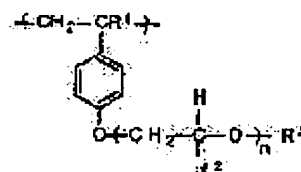
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**(54) BLOCK-GRAFT COPOLYMER AND SELF-CROSSLINKING SOLID POLYELECTROLYTE PRODUCED BY USING THE SAME AND PRODUCTION OF THE POLYELECTROLYTE****(57)Abstract:**

**PROBLEM TO BE SOLVED:** To obtain a block-graft copolymer useful for a self-crosslinking solid polyelectrolyte adapted for electric cells, the polyelectrolyte being inexpensive, apart from swelling and dissolving in each kind of electrolytes, excellent in liquid-retainability and mechanical strength.

**SOLUTION:** This copolymer is obtained by including (A) a block chain of a polymer having a polymerization degree of  $\geq 10$ , the chain comprising the repeating unit of formula I (R1 is H, etc.; R3 is an alkyl, etc.; (n) is 1 to 100; and a number average molecular weight of the graft chain of formula II is 45 to 4400) and (B) a block chain of a polymer having a polymerization degree of  $\geq 30$ , the chain comprising the repeating unit of formula III (R4 and R5 are each H, etc.; (n) is 2 or 3; (l+m) is  $\geq 300$ ; (l:m) is (95 to 5):(50 to 50); and (l) and (m) are subjected to random or alternate sequence) in the A:B ratio of (1 to 30):(30 to 1). The objective copolymer is  $\geq 300$  in polymerization degree and useful for filmy polymer batteries, etc.

**LEGAL STATUS**

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